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ABSTRACT

Data generated in the 1974-75 and 1979-80 reading performance assessments conducted by the National Assessment of Educational Progress (NAEP) were analyzed to determine if changes had occurred in the performance of Hispanic students. Results showed that although Hispanic students' reading performance remained below the national level, these students had made some significant gains in reading from 1974 to 1980. Moreover, the performance gains among Hispanic children at age 9, and among several groups of Hispanic students at ages 13 and 17 exceeded those of students nationally in certain areas. Specifically (1) the performance of 9-year-old Hispanos improved 5.3% compared to a 2.6% improvement for all 9-year-old students surveyed; (2) this improvement was greatest on exercises assessing literal comprehension; (3) 13-year-old Hispanos' performance stayed about the same between 1974 and 1980, but 13-year-old Hispanos in large cities improved their performance on literal comprehension exercises by 5.9 points; (4) 17-year-old Hispanos' performance also stayed about the same between assessments, with large city students again showing an improvement, primarily on exercises assessing inferential comprehension; and (5) at all three ages, Hispanos in the modal grade performed better than those below modal grade and improved their performance at a faster rate. (FL) Results (Selective) (Secondary Analysis)

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TWO NATIONAL ASSESSMENTS OF READING

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PERFORMANCE OF HISPANIC STUDENTS IN
TWO NATIONAL ASSESSMENTS OF READING

Summary

Results of two assessments of reading performance among American students show that although Hispanic students' reading performance remains below the national level, Hispanics have made some significant gains in reading from 1974 to 1980. Moreover, the performance gains among Hispanic youngsters at age 9 and among several groups of Hispanic students at ages 13 and 17 exceed those of students nationally in certain areas of reading performance. For instance:

- The performance of 9-year-old Hispanics improved 5.3%, compared to a 2.6% improvement for all 9-year-olds.
- Improvement at age 9 was greatest (5.9%) on exercises assessing literal comprehension.
- Nine-year-old Hispanics attending schools in cities of 200,000 or more improved 8.4 percentage points.
- Thirteen-year-old Hispanics' performance stayed about the same between 1974 and 1979; big-city 13-year-old Hispanics improved their performance on literal comprehension exercises by 5.9 points.
- Seventeen-year-old Hispanics' performance also stayed about the same between assessments. Again, big-city students showed an improvement, this time in exercises assessing inferential comprehension.
- At all three ages, Hispanics in the modal grade performed better than those below modal grade and improved their performance at a faster rate. This is noteworthy because the proportions of Hispanics who are below modal grade are known to be higher than the proportions of white young people.

The Study and Its Limitations

The National Assessment of Educational Progress (NAEP) surveyed the reading skills of 9-, 13- and 17-year-old American students during the 1970-71, 1974-75 and 1979-80 school years. Each assessment included some of the same exercises so that results could be compared over time. In the first assessment, Hispanic students were not identified as a separate group. However, Hispanic students were identified in the second and third assessments; therefore, changes in performance can be reported. For complete information about the reading assessments, see Three National Assessments of Reading: Changes in Performance, 1970-80 (1981) and Procedural Handbook: 1979-80 Reading and Literature Assessment (1981). This paper reports only a portion of the reading data and is not intended to be comprehensive by itself.

The term "Hispanic" is being used in a qualified way in this paper because of the way National Assessment identified Hispanic students and because certain segments of the U.S. Hispanic student populations -- those who speak no English and those who drop out of school -- have not been included in the assessments.

In the first two reading assessments, ethnicity was determined visually by the people who administered the assessments in the schools. National Assessment altered this procedure during the third assessment by asking 17-year-olds to identify their ethnic backgrounds themselves and simultaneously using visual identification. Under these circumstances, 8.2% of the 17-year-olds identified themselves as Hispanos. In contrast, 4% of the 17-year-olds were identified as Hispanic by assessment administrators. This disparity between visual and self-identification results raised the question of whether the NAEP results based upon visual identification were sufficient indicators of Hispanic students' performance. As far as one can tell, they were. The performance mean for visually identified 17-year-old Hispanos was 58.8%; the mean for the self-identified group was 58.0%, not statistically different. Whether there is any performance difference between visually and self-identified Hispanos at ages 9 and 13 will not be known until the next assessment. Readers should note that the findings presented in this paper are based upon visually identified Hispanic young people.

Another question about the assessment samples is whether too many Hispanos were screened out even before the assessment, on the grounds that they spoke no English at all. About 1% of all the students selected for the NAEP sample are routinely screened out if they do not speak English, since the assessments are only administered in English. Hispanos probably constitute a disproportionate share of these screened-out students. Since there are currently no plans to administer national assessments to

non-English-speaking students, this small but important group of students will remain out of the NAEP sample, and interpreters of the Hispanic data will have to keep that fact in mind.

A third relevant point to be made about Hispanic students is that a higher proportion of them are below the modal grade -- that is, the grade in which the majority of students at a given age can be found. Students in the modal grade perform better than those who are below it. This is reflected in the tables in this paper by the fact that modal grade performance is always better than the performance of the entire Hispanic group, which includes a large proportion of students below modal grade.

Finally, it has been established that Hispanic students have a higher than average attrition rate in the schools. Thus, the Hispanos included in the assessment are only those who have stayed in school, and they may differ in some systematic way from those who have dropped out.

The Findings

Table 1 reveals that in the 1979-80 reading change assessment, Hispanic students as a whole performed somewhat below the national level at each age, although some groups of Hispanic students performed better than others. Tables 2-5 demonstrate that Hispanic performance in that assessment represented an improvement over the previous assessment in many instances. The general trend was positive, even though not all of the advances were statistically significant.

The greatest improvements by Hispanic students occurred at age 9 (Table 2). The gain by 9-year-old Hispanos (5.3%) more than doubled that of 9-year-olds nationally (2.6%). Contributing to the improvement in overall reading performance were Hispanic females, those attending schools in big-city communities, those in grade 4 (the modal grade for 9-year-olds) and students who reported that at least one parent had had some post high school education.

Reading performance for Hispanic 13- and 17-year-olds was similar to national patterns of performance, which showed no significant declines or increases in reading for either age population between the second and third assessments.

Following the first reading assessment, exercises retained for readministration in the second and third assessments were clustered into three broad categories: literal comprehension, inferential comprehension and reference skills (Three National Assessments of Reading: Changes in Performance, 1970-80, 1981, p. 4). Literal comprehension exercises involved locating or

remembering the exact meaning of a word, sentence or paragraph. Inferential comprehension exercises required students to glean from a passage some idea that is not explicitly stated. Reference skills exercises involved knowing how to find and use informational sources such as dictionaries, libraries or indexes. Results for these subareas follow.

Table 1.
Mean Performance Levels on Reading Change
Assessment, 1979-80

	Age 9 Mean % Correct Responses, 1980, 58 Exercises	Age 13 Mean % Correct Responses, 1979, 71 Exercises	Age 17 Mean % Correct Responses, 1980, 71 Exercises
Nation	67.9	60.8	68.3

Race			
Hispanic	60.3	51.5	58.8
White	70.0	63.4	71.2
Black	59.6	49.6	52.2
Hispanic by groups Ω			
Male	57.2	50.8	57.3
Female	63.2	52.3	60.7
Western region	59.7	50.4	58.8
Big cities $\S$	60.8	50.8	60.4
Modal grade $\#$	66.4	54.5	62.3
NGH and GHS+	58.8	51.0	57.1
PHS++	65.2	56.5	66.4

Ω Cell-counts for Hispanic students are too small for two-way analysis of all variables within NAEP reporting categories.

$\S$ Big cities are those with a population of 200,000+.

$\#$ Modal grade is the grade in which the majority of students are found. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11. In 1980, 42% of Hispanic 9-year-olds were below modal grade, compared to 27% of the whites and 34% of the blacks. At age 13, 31% were below, compared to 28% of the whites and 35% of the blacks. And at age 17, 27% were below, compared to 11% of the whites and 29% of the black teenagers.

+Students neither of whose parents graduated from high school (NHS) are combined with students who had at least one parent graduating from high school (GHS) to create one category.

++Post high school (PHS) includes students who had at least one parent educated beyond high school.

Table 2.
Mean Change in Performance for Hispanic Students
in Two Reading Assessments, All Exercises

	Age 9 (58 Exercises)		Age 13 (71 Exercises)		Age 17 (71 Exercises)	
	Mean Change 1975-80	Standard Error of Change†	Mean Change 1974-79	Standard Error of Change†	Mean Change 1975-80	Standard Error of Change†
Nation	2.6*	(0.5)	0.9	+(0.6)	-0.7	(0.7)

Race						
Hispanic	5.3*	(1.9)	2.4	(2.0)	2.0	(2.3)
White	2.2*	(0.7)	0.7	(0.7)	-0.7	(0.7)
Black	5.1*	(1.3)	3.1*	(1.3)	0.0	(1.4)
Hispanic by groups‡						
Male	4.3	(2.6)	3.5	(2.6)	2.6	(3.1)
Female	6.2*	(2.6)	1.2	(2.7)	1.5	(3.2)
Western region	4.1	(2.2)	1.2	(2.3)	1.8	(2.8)
Big cities§	8.4*	(2.7)	4.4	(2.7)	4.1	(3.3)
Modal grade#	6.4*	(2.4)	-0.5	(2.4)	0.7	(2.9)
NGH and GHS+	3.5	(2.7)	1.9	(2.4)	0.4	(2.6)
PHS++	8.1*	(3.6)	-0.8	(4.1)	4.1	(4.6)

†NAEP adheres to the convention whereby differences between statistics are designated as statistically significant only if the difference is at least twice as large as the standard error. Differences this large would occur by chance in fewer than 5% of all possible replications of the sampling, data collection and scoring procedures for any particular age group or reporting group. Statistically significant changes are denoted by an asterisk (*).

‡Cell-counts for Hispanic students are too small for two-way analysis of all variables within NAEP reporting categories.

§Big cities are those with a population of 200,000+.

#Modal grade is the grade in which the majority of students are found. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11.

+Students neither of whose parents graduated from high school (NHS) are combined with students who had at least one parent graduating from high school (GHS) to create one category.

++Post high school (PHS) includes students who had at least one parent educated beyond high school.

Literal Comprehension

Table 3 displays literal comprehension results for Hispanic students. Those youngsters improved by 5.9 percentage points from the second to the third assessment, while the national gain was 2.8 percentage points. Six of the seven groups for whom data are available improved in performance on literal comprehension exercises between the two assessments. The largest gain by a group (12.1%) occurred for those students who reported that at least one parent had had some post high school education.

The literal comprehension results for Hispanic 13-year-olds indicate that the age population as a whole did not evidence a statistically significant improvement on these exercises from the second to the third assessment. However, males and students attending school in big-city communities made significant gains (5.2% and 5.9%, respectively) between the second and third assessments.

The picture for Hispanic 17-year-olds, like that for the nation, is one of stability. Changes in performance between the second and third assessments, whether negative or positive, are not statistically significant for the literal comprehension exercises.

Inferential Comprehension

Nine-year-old Hispanic students made significant gains in inferential comprehension (Table 4). Again, their gain (4.7%) was greater than that of 9-year-olds nationally (2.5%). Contributing to the gain for this age population were females, who gained by 5.7 percentage points, students in fourth grade, who gained by 5.2 percentage points, and students attending schools in big-city communities, who gained by 7.6 percentage points. Although assessment results indicate that the remaining groups showed increases in the number of students successfully responding to the inferential comprehension exercises, none of these increases are statistically significant.

Unlike the 9-year-olds, 13-year-old Hispanic students did not evidence gains in inferential comprehension. Neither did 17-year-old Hispanic students, as a whole, gain in performance on inferential comprehension, but those attending schools in big-city communities made a substantial gain of 7.1.

Table 3.
Mean Change in Performance for Hispanic Students
in Two Reading Assessments, Literal Comprehension Exercises

	Age 9 (20 Exercises)		Age 13 (38 Exercises)		Age 17 (35 Exercises)	
	Mean Change 1975-80	Standard Error of Change†	Mean Change 1974-79	Standard Error of Change†	Mean Change 1975-80	Standard Error of Change†
Nation	2.8*	(0.6)	0.9	(0.6)	-0.7	(0.6)

Race						
Hispanic	5.9*	(1.9)	3.4	(2.0)	1.1	(2.3)
White	2.2*	(0.7)	0.7	(0.7)	-0.7	(0.7)
Black	6.3*	(1.3)	3.4*	(1.3)	0.8	(1.4)
Hispanic by groupsΩ						
Male	5.8*	(2.6)	5.2*	(2.6)	1.4	(3.1)
Female	5.9*	(2.6)	1.4	(2.7)	1.0	(3.2)
Western region	5.4*	(2.2)	2.2	(2.3)	0.6	(2.8)
Big cities§	7.2*	(2.7)	5.9*	(2.7)	1.6	(3.3)
Modal grade#	7.1*	(2.4)	0.2	(2.4)	-0.7	(2.9)
NGH and GHS+	3.4	(2.7)	4.1	(2.4)	-0.6	(2.6)
PHS++	12.1*	(3.6)	-0.6	(4.1)	3.7	(4.6)

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ΩCell-counts for Hispanic students are too small for two-way analysis of all variables within NAEP reporting categories.

§Big cities are those with a population of 200,000+.

#Modal grade is the grade in which the majority of students are found. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11.

+Students neither of whose parents graduated from high school (NHS) are combined with students who had at least one parent graduating from high school (GHS) to create one category.

++Post high school (PHS) includes students who had at least one parent educated beyond high school.

Table 4.
Mean Change in Performance for Hispanic Students
in Two Reading Assessments, Inferential Comprehension Exercises

	Age 9 (27 Exercises)		Age 13 (24 Exercises)		Age 17 (25 Exercises)	
	Mean Change 1975-80	Standard Error of Change†	Mean Change 1974-79	Standard Error of Change†	Mean Change 1975-80	Standard Error of Change†
Nation	2.5*	(0.5)	0.2	(0.6)	-1.2	(0.8)

Race						
Hispanic	4.7*	(1.9)	1.2	(2.0)	2.3	(2.3)
White	2.2*	(0.7)	0.1	(0.7)	-1.0	(0.7)
Black	4.7*	(1.3)	2.0	(1.3)	-1.6	(1.4)
Hispanic by groups‡						
Male	3.4	(2.6)	1.4	(2.6)	3.7	(3.1)
Female	5.7*	(2.6)	0.7	(2.7)	1.1	(3.2)
Western region	3.1	(2.2)	0.2	(2.3)	2.3	(2.8)
Big cities§	7.6*	(2.7)	2.4	(2.7)	7.1*	(3.3)
Modal grade#	5.2*	(2.4)	-2.1	(2.4)	1.9	(2.9)
NGH and GHS+	3.3	(2.7)	-1.0	(2.4)	1.2	(2.6)
PHS++	4.6	(3.6)	1.0	(4.1)	3.7	(4.6)

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#Modal grade is the grade in which the majority of students are found. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11.

+Students neither of whose parents graduated from high school (NHS) are combined with students who had at least one parent graduating from high school (GHS) to create one category.

++Post high school (PHS) includes students who had at least one parent educated beyond high school.

Reference Skills

Nine-year-olds nationally made a significant gain (2.6%) on the reference skills exercises from the second to the third assessment. Hispanic 9-year-olds showed a 4.8 point gain, which was not statistically significant due to the small number of students and exercises involved (Table 5).

Although 9-year-olds as a whole did not experience a significant gain, three of the reporting groups made large gains. Students attending schools in big-city communities gained by 13.9 percentage points, females gained by 8.5 percentage points and students in the fourth grade gained by 8.0 percentage points.

Nationally, 13-year-olds gained by 2.6 percentage points on the reference skills exercises, while Hispanic students' performance remained stable on these exercises. Also, no significant gains or losses are reflected in the performance results for the reporting groups.

The performance of 17-year-old Hispanic students was, again, similar to that of national results for this age population, indicating consistency in performance from the second to third reading assessment.

Table 5.
Mean Change in Performance for Hispanic Students
in Two Reading Assessments, Reference Skills Exercises

	Age 9 (8 Exercises)		Age 13 (9 Exercises)		Age 17 (11 Exercises)	
	Mean Change 1975-80	Standard Error of Change†	Mean Change 1974-79	Standard Error of Change†	Mean Change 1975-80	Standard Error of Change†
Nation	2.6*	(0.7)	2.6*	(1.0)	0.2	(1.0)

Race						
Hispanic	4.8	(2.9)	1.9	(2.9)	3.8	(3.5)
White	2.6*	(1.0)	2.8*	(1.0)	0.4	(1.0)
Black	2.7	(1.9)	4.9*	(1.9)	1.3	(2.1)
Hispanic by groupsΩ						
Male	1.0	(3.9)	1.9	(3.9)	3.9	(4.7)
Female	8.5*	(3.9)	1.9	(4.0)	3.5	(4.7)
Western region	2.5	(3.3)	-0.6	(3.5)	3.9	(4.2)
Big cities§	13.9*	(4.0)	3.6	(4.1)	5.4	(4.9)
Modal grade#	8.0*	(3.5)	0.8	(3.7)	2.0	(4.3)
NGH and GHS+	3.3	(2.9)	0.0	(2.6)	1.2	(2.7)
PHS++	5.0	(5.4)	-6.7	(6.0)	6.3	(6.7)

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ΩCell-counts for Hispanic students are too small for two-way analysis of all variables within NAEP reporting categories.

§Big cities are those with a population of 200,000+.

#Modal grade is the grade in which the majority of students are found. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11.

+Students neither of whose parents graduated from high school (NHS) are combined with students who had at least one parent graduating from high school (GHS) to create one category.

++Post high school (PHS) includes students who had at least one parent educated beyond high school.

APPENDIX

N-Counts and Proportions, 1974-75

	Age 9		Age 13		Age 17	
	Weighted % of		Weighted % of		Weighted % of	
	<u>Nation</u>	<u>Nation</u>	<u>Nation</u>	<u>Nation</u>	<u>Nation</u>	<u>Nation</u>
Hispanic	855	4.8	900	4.9	550	3.5
White	16,880	80.0	16,958	80.9	16,297	83.9
Black	3,609	13.4	3,208	12.7	2,522	11.1

Hispanic and National Estimated Proportions

	Age 9		Age 13		Age 17	
	<u>Hispanic</u>	<u>National</u>	<u>Hispanic</u>	<u>National</u>	<u>Hispanic</u>	<u>National</u>
Male	51.0%	50.0%	52.0%	49.9%	50.9%	48.8%
Female	49.0	50.0	48.0	50.1	49.1	51.2
West	75.8	24.7	79.2	25.6	80.0	25.0
Big cities	39.2	17.8	30.8	16.6	30.9	16.2
Modal grade	68.6	75.3	53.1	71.6	53.9	73.0
Not graduated high school & graduated high school	40.0	33.8	56.4	47.1	68.8	49.6
Post high school	21.8	34.2	14.9	40.2	20.2	46.4
Unknown parental education	38.2	32.1	28.7	12.7	11.0	4.1

N-Counts and Proportions, 1979-f0

	<u>Age 9</u>		<u>Age 13</u>		<u>Age 17</u>	
	<u>Nation</u>	<u>Weighted % of Nation</u>	<u>Nation</u>	<u>Weighted % of Nation</u>	<u>Nation</u>	<u>Weighted % of Nation</u>
Hispanic	567	5.6	523	5.5	371	4.0
White	5,980	79.0	6,527	79.7	6,288	82.5
Black	1,202	14.0	1,174	13.5	950	12.2

Hispanic and National Estimated Proportions

	<u>Age 9</u>		<u>Age 13</u>		<u>Age 17</u>	
	<u>Hispanic</u>	<u>National</u>	<u>Hispanic</u>	<u>National</u>	<u>Hispanic</u>	<u>National</u>
Male	50.4%	50.2%	54.3%	48.8%	53.2%	50.8%
Female	49.6	49.8	45.7	51.2	46.8	49.2
West	70.6	27.0	66.6	25.3	68.9	27.7
Big cities	35.8	17.3	49.3	17.9	45.9	17.8
Modal grade	54.6	70.4	57.2	68.8	64.3	76.9
Not graduated high school						
& graduated high school	36.2	31.8	55.4	41.5	70.6	46.0
Post high school	29.7	41.1	23.4	48.3	22.7	51.0
Unknown parental education	34.0	27.0	21.7	10.3	6.7	3.0

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